Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-33. (Cancelled)

34. (Previously Presented) A substantially pure mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae*, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells.

35. (Previously Presented) The polypeptide of claim 34, wherein said mycoplasma polypeptide is obtained from pathogenic *Mycoplasma hyopneumoniae*.

36. (Previously Presented) The polypeptide of claim 34, wherein said mycoplasma polypeptide is about 80 percent pure.

37. (Previously Presented) The polypeptide of claim 34, wherein said mycoplasma polypeptide is about 90 percent pure.

38. (Previously Presented) The polypeptide of claim 34, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.

39. (Previously Presented) A substantially pure antibody capable of binding a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae*, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells.

40. (Previously Presented) The antibody of claim 39, wherein said antibody is a monoclonal antibody.

41. (Previously Presented) The antibody of claim 39, wherein said antibody is a mouse antibody.

42. (Previously Presented) The antibody of claim 39, wherein said mycoplasma polypeptide is obtained from pathogenic *Mycoplasma hyopneumoniae*.

43. (Previously Presented) The antibody of claim 39, wherein said antibody is about 80 percent pure.

44. (Previously Presented) The antibody of claim 39, wherein said antibody is about 90 percent pure.

45. (Previously Presented) The antibody of claim 39, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.

46. (Previously Presented) A method for inducing an immune response in a mammal, wherein said immune response is against a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae*, said method comprising administering a substantially pure mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae* to said mammal under conditions wherein said mammal produces antibodies against said mycoplasma polypeptide, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells.

47. (Previously Presented) The method of claim 46, wherein said mammal is a mouse, rabbit, or pig.

48. (Previously Presented) The method of claim 46, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.

49. (Previously Presented) A method for binding an antibody to a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae*, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells, said method comprising:

a) obtaining an antibody capable of binding said mycoplasma polypeptide, and

b) contacting said antibody with said mycoplasma polypeptide under conditions wherein said antibody binds said mycoplasma polypeptide.

50. (Previously Presented) The method of claim 49, wherein said antibody is a monoclonal antibody.

51. (Previously Presented) The method of claim 49, wherein said antibody is a mouse antibody.

52. (Previously Presented) The method of claim 49, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.

53. (Currently Amended) A method for identifying an inhibitor of mycoplasma induced calcium release from cells, said method comprising:

a) contacting porcine ciliated tracheal cells with a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae* and a test compound, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells,

b) determining whether said test compound inhibits said cells from releasing calcium, wherein inhibition of calcium release from said cells by said test compound indicates that said test compound is said inhibitor.

54. (Previously Presented) The method of claim 53, wherein said test compound is a protease.

55. (Previously Presented) The method of claim 53, wherein said test compound is an antibody.

56. (Previously Presented) The method of claim 53, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.

57. (Currently Amended) A method for identifying an inhibitor of calcium release from cells induced by a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae*, wherein said mycoplasma polypeptide increases calcium release from porcine ciliated tracheal cells, said method comprising:

a) contacting porcine ciliated tracheal cells with a mycoplasma polypeptide of a pathogenic *Mycoplasma hyopneumoniae* pretreated with a test compound, and

b) determining whether said test compound inhibits said cells from releasing calcium, wherein inhibition of calcium release from said cells by said test compound indicates that said test compound is said inhibitor.

58. (Previously Presented) The method of claim 57, wherein said test compound is a protease.

59. (Previously Presented) The method of claim 57, wherein said test compound is an antibody.

60. (Previously Presented) The method of claim 57, wherein the molecular weight of said mycoplasma polypeptide following a tryptic digest is between about 10 kDa and about 80 kDa.